

REMARKS

This Amendment is submitted in response to the Office Action mailed on July 16, 2003. Claims 1, 6-8, 13-15 and 20-26 have been amended, and claims 27-29 have been withdrawn in response to a Restriction Requirement raised by the Examiner. Claims 1-26 remain in the present application. In view of the foregoing amendments, as well as the following remarks, Applicants respectfully submit that this application is in complete condition for allowance and request reconsideration of the application in this regard.

Claims 1, 2, 5 and 15-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Anderson et al., U.S. Patent No. 4,627,214. Claims 7-14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Voges, U.S. Patent No. 4,887,502. Claims 3, 4 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson et al. in view of Bando, U.S. Patent No. 5,888,268. Lastly, the prior art made of record and not relied upon as considered pertinent to Applicants' disclosure are Cavagna, U.S. Patent No. 4,934,234, Ritzling, U.S. Patent No. 4,316,317, Simko, U.S. Patent No. 4,102,227, Ima et al., U.S. Patent No. 5,761,980, Gunn et al., U.S. Patent No. 3,886,833, Yamashita et al., U.S. Patent No. 4,252,044, Tokuno et al., U.S. Patent No. 4,580,086 and Tokuno et al., U.S. Patent No. 4,548,109. While Applicants respectfully traverse these rejections, Applicants have amended each of independent claims 1, 6-7,

13-15 and 21-26 to more sharply define the present invention over the prior art of record and respectfully request that the rejections be withdrawn.

In particular, Applicants have amended each of independent claims 1, 6 and 25 to recite inner and outer pairs of upper rail supports and inner and outer pairs of lower rail supports. Thus, the machine according to claims 6 and 25, has a pair of upper inner rails, a pair of upper outer rails, a pair of lower inner rails and a pair of lower outer rails. The first knife holder assembly is supported by one pair of the inner and outer pairs of upper rail supports and the second knife holder assembly is supported by one pair of the inner and outer pairs of lower rail supports. Each of independent claims 1, 6 and 25 has further been amended to recite that the first knife holder assembly is nestable with an adjacent first knife holder assembly and the second knife holder assembly is nestable with an adjacent second knife holder assembly.

This aspect of the invention is fully described at page 9, lines 16-25 of the disclosure and allows for close pack nesting of the adjacent knife holder assemblies for slitting relatively narrow mults. This claimed feature is illustrated most clearly in Fig. 3 which shows that each knife holder assembly (56) is coupled through a pair of linear bearing blocks (104) to a pair of rails (110). Each pair of linear bearing blocks (104) are mounted in either an inboard or outboard position (106, 108). Each of the upper and lower rails (110) are provided in inner and outer

rail pairs to support the knife holder assemblies (56) so that adjacent knife holder assemblies (56) are nestable.

In the slitting and scoring machine of Anderson et al., each of the plurality of upstream upper scoring assemblies (28) and plurality of downstream upper slitting assemblies (30) are mounted to upper and lower pairs of linear bearings (26, 27) as shown in Fig. 5. Accordingly, Anderson et al. is completely silent with respect to inner and outer pairs of upper and lower rail supports and nestability of the assemblies (28, 30) as now recited in each of amended independent claims 1, 6 and 25 and the rejections of these claims should be withdrawn.

Each of independent claims 7, 13, 14 and 23 has been amended to recite that each of the drive shaft assemblies comprises a plurality of drive shaft sections each being coupled through a coupling to an adjacent drive shaft section for rotation in the frame. Each coupling is mounted to rotate with the plurality of coupled drive shaft sections.

This aspect of the invention is fully described at page 6, line 32 through page 7, line 25 of the disclosure and allows the drive shaft sections to be uncoupled for repair, replacement or servicing of the various components of the knife holder assemblies. This claimed feature is illustrated most clearly in Figs. 7 and 8 which show that each drive shaft section (74) preferably includes a spindle (76) projecting axially therefrom in opposition to the spindle (76) on the adjacent

drive shaft section (74) of the respective pair. A tubular coupling (77) surrounds the spindles (76) to transfer the rotational movement of the drive shaft assemblies (44, 46) along the length of the shafts.

In the slitting machine of Voges, upper and lower powered arbors (4, 6) are mounted on the frame (2). Upper and lower storage arbors (8, 10) are also mounted on the frame (2) and further align axially with the upper and lower powered arbors (4, 6), respectively. The storage arbors (8, 10) are fixed and therefore do not rotate with the respective upper and lower powered arbors (4, 6). The free ends of the storage arbors (8, 9) have radial bearings (76) which receive spindles (62) provided on the free ends of the powered arbors (4, 6). When the spindles (62) of the powered arbors (4, 6) are received within the bearings (76) of the storage arbors (8, 10), the free ends of the powered arbors (4, 6) are supported by the storage arbors (8, 10), yet the powered arbors (4, 6) can turn relative to the fixed storage arbors (8, 10) (see Column 6, lines 13-26). Accordingly, the bearings (76) of Voges are not mounted to rotate with the powered arbors (4, 6) as now recited in amended independent claim 7 but rather are stationary to receive the free ends of the powered arbors (4, 6) which rotate therein. Therefore, Voges is completely silent with respect to a coupling for coupling adjacent drive shaft sections wherein the coupling is mounted to rotate with the coupled drive shaft sections and the rejection of these claims should be withdrawn.

Lastly, each of independent claims 15, 21, 22, 24 and 26 has been amended to recite that the upper frame is pivotally coupled to the lower frame through a pivot shaft to adjust relative vertical positioning of the knives of the first and second knife holder assemblies for slitting metal sheets of differing thicknesses. This aspect of the invention is fully described at page 7, line 26 through page 8, line 23 of the disclosure and is shown in Fig. 3, for example.

In the slitting and scoring machine of Anderson et al., the upstream portion of the upper box beam (10) pivots upwardly, with the beam (10) pivoting about the downstream upper hex-shaft (35) (see Column 6, lines 26-58 and Figs. 3 and 9). Accordingly, Anderson et al. taken alone, or in combination with the other prior art of record, fails to teach or suggest an upper frame pivotally coupled to a lower frame through a pivot shaft as now recited in each of amended independent claims 15, 21, 22, 24 and 26 and the rejections of these claims should be withdrawn.

Moreover, as claims 2-5, 8-12 and 16-20 depend from allowable independent claims 1, 7 and 15, respectively, and further as each of these claims recites a combination of elements not taught or suggested by the prior art of record, Applicants respectfully submit that these claims are allowable as well.

A minor amendment has been made to dependent claim 8 and dependent claim 20 has been amended to recite that the pivot shaft is offset from each of the upper and lower drive shaft assemblies as is clearly shown in Fig. 3.

Conclusion

In view of the foregoing response including the amendments and remarks, this application is submitted to be in complete condition for allowance and early notice to this affect is earnestly solicited. If there is any issue that remains which may be resolved by telephone conference, the Examiner is invited to contact the undersigned in order to resolve the same and expedite the allowance of this application.

If any additional fee is required to complete this communication, please charge Deposit Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.



David H. Brinkman, Reg. No. 40,532

2700 Carew Tower
441 Vine Street
Cincinnati, Ohio 45202
(513) 241-2324 - Voice
(513) 421-7269 - Facsimile